REMARKS

The present amendment to the claims is submitted pursuant to Rule 607(c) and 35 U.S.C. §135(b). The claims marked as new correspond exactly or substantially to one or more claims of U.S. Patent 6,448,009 (the '009 patent). This Amendment is timely as the '009 patent issued on September 10, 2002. Attached to this Amendment is a copy of the '009 patent.

I. The Invention

The invention is a method for identifying a gene that modulates a process in a biological system utilizing nucleic acids (ribozymes) having randomized substrate binding sites.

II. Status of the Claims

Claims 1-38 are cancelled. Claims 39-68 are pending. New claims 69–98 are added.

III. Support for the New Claims

New claims 69-98 are fully supported by the present application as originally filed. Specific support can be found throughout the specification, including examples and original claims. The following are examples of support for the new claims.

This is an application that lacks line numbering. All references to paragraphs presume that the carryover paragraph, if present, is the first paragraph.

Claims 69-71 find support on page 1, first and second paragraphs (describing ribozymes as catalysts) and on page 6, first and second paragraphs (describing the general method of identifying a gene that modulates a process in a biological system by introducing a library of ribozymes having randomized substrate binding sequences, selecting a ribozyme whose catalytic activity effects a phenotypic change in the biological system, and sequencing the binding site sequence of the ribozyme to identify the gene whose mRNA was cleaved by the ribozyme). Claims 69-71 correspond to claims 1-3 of the '009 patent.

Claims 72-74, reciting different types of ribozymes, find support on page 1, second paragraph, and on page 22, last paragraph through page 23, where both hammerhead ribozymes and hairpin ribozymes are identified. Claims 72-74 correspond to claims 4-6 of the '009 patent.

Claims 75-77, reciting bacterial, plant and mammalian systems, find support on page 27, the section entitled, "Cells to be transduced," and on page 44, third paragraph (mammal). Claims 75-77 correspond to claims 8-10 of the '009 patent.

Claim 78, reciting different types of phenotypic changes, finds support on pages 52-54, section g, entitled, "Uses of ribozyme gene vector libraries." Claim 78 corresponds to claim 13 of the '009 patent.

Claims 79-83, reciting different types of expression vectors, find support on pages 25-27 in section ii., entitled, "Insertion of randomized ribozyme genes into a cloning or expression vector." Claims 79-83 correspond to claims 14-18 of the '009 patent.

Claims 84-87, reciting different types of viral vectors, find support on pages 30-35, section iv., entitled, "Vectors useful for maximal ribozyme expression." (Sindbis/Seliki Forest viruses are alphaviruses). Claims 84-87 correspond to claims 19-22 of the '009 patent.

Claim 88, reciting an expression vector derived from a bacterial plasmid, finds support on the carryover paragraph between pages 25 and 26 where prokaryote expression vectors are suggested. Claim 88 corresponds to claim 23 of the '009 patent.

Claims 89-91, reciting different promoters, find support on page 35, section v., entitled, "Promoters useful for ribozyme expression." Pol II promoters are mRNA promoters and find support in the Beta-actin and gamma-globin promoter. Claims 89-91 correspond to claims 24-26 of the '009 patent.

Claims 92-93, reciting biological systems of prokaryotic and eukaryotic origin, find support on page 27, section i., entitled, "Cells to be transduced," describing both prokaryotic and eukaryotic cell systems. Claims 92-93 correspond to claims 30-31 of the '009 patent, respectively.

Claims 94-95, reciting binding domain length, find support on page 22, second paragraph. Claims 94-95 correspond to claims 33-34 of the '009 patent.

Claims 96-98, reciting two binding arms, find support on page 22, second paragraph, and page 1, second paragraph, describing different ribozymes inherently having two binding arms; and on page 64, first paragraph, describing the two randomized binding arms of a hairpin ribozyme. Claims 96-98 correspond to claims 36-38 of the '009 patent.

Applicants respectfully request that the Examiner enter the amendment.

CONCLUSION

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Kenneth A. Weber
Reg. No. 31,677

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
Attachment
KAW:cg
60028025 v1